

CLAIMS

1. A ventilator unit for ventilating the inside of a garment such as a pressure suit or the like with an ambient fluid, the unit being characterized by the fact
5 that it comprises:
- a first leaktight case (1) having at least one inlet opening (2) suitable for sucking in said fluid, and an outlet opening (3), and also a first electrical connection passage (4);
 - 10 a filter cartridge (5);
means (6) for mounting the filter cartridge (5) in association with the inlet opening (2) of the first case (1);
 - an impeller (7) having at least one inlet port (8)
15 for sucking in said fluid contained in said first case (1), and an outlet orifice (9) for delivering said sucked-in fluid, said impeller (7) having a drive motor (10) controllable via a power supply input (11);
means (12) for mounting said impeller (7) in the
20 inside (13) of the first case (1);
 - a duct (14) for connecting the outlet orifice (9) of the impeller (7) to the outside (15) of the first case (1), said duct (14) passing in leaktight manner through the outlet opening (3) of the first case (1);
 - 25 a second case (20);
a second electrical connection passage (21) made through the wall (49) of said second case (20);
a source (23) suitable for delivering electrical energy to an output terminal (24), said source (23) being
30 disposed in the inside (25) of the second case (20);
an electronic control circuit (26);
means (27) for associating the first and second cases (1, 20) in such a manner that the first and second electrical connection passages (4, 21) form a single
35 leakproof third electrical connection passage (28);
a flow meter (29) disposed inside the duct (14), said flow meter having an outlet (30) suitable for

delivering an electrical signal representative of the flow rate of fluid passing along the duct (14);

5 a first electrical connector (31) for connecting the output (30) of the flow meter (29) to a first input (32) of the electronic control circuit (26);

a second electrical connector (33) for connecting a first control output (34) of the electronic control circuit (26) to the control input (11) of the motor (10) for driving the impeller; and

10 a third electrical connector (35) for connecting the electrical energy source (23) to a power supply input (36) of the electronic control circuit (26);

said electronic control circuit (26) further including an output (37) suitable for delivering a first alarm signal when the level of electrical energy delivered by said source (23) drops below a determined threshold value.

20 2. A ventilator unit according to claim 1, characterized by the fact that said electronic control circuit (26) is located inside the second case (20).

3. A ventilator unit according to claim 1 or claim 2, characterized by the fact that it further comprises:

25 a switch (40) mounted in leaktight manner through the wall (41) of the first case (1) so that its control element (42) is accessible from the outside (15) of the first case (1) and its electrical control terminals (43) are situated in the inside (13) of the first case (1);

30 and

a fourth electrical connector (44) for connecting the electrical control terminals (43) of said switch (40) to a control input (45) of the electronic control circuit (26).

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4. A ventilator unit according to claim 2 or claim 3, characterized by the fact that it includes an electrical

connection pin (22) mounted in leaktight manner through the wall (49) of the second case (20), the output terminals (46) thereof being situated in the inside (25) of said second case (20) and being connected respectively
5 to an energy feed input (47) of said energy source (23) and to a control input (48) of the electronic control circuit (26).

10 5. A ventilator unit according to any one of claims 1 to 4, characterized by the fact that it comprises:
a converter (50) controllable from a control input (51), said converter being suitable for transforming an electrical signal into a sound signal; and
a fifth electrical connector (52) for connecting the
15 control terminal (51) of the converter (50) to that output (37) of the electronic control circuit that is suitable for delivering said first alarm signal.

20 6. A ventilator unit according to claim 5, characterized by the fact that said converter (50) is situated in said duct (14).

25 7. A ventilator unit according to claim 5 or claim 6, characterized by the fact that said converter (50) is constituted by at least one of the following elements: a buzzer, a loudspeaker.

30 8. A ventilator unit according to any one of claims 1 to 7, characterized by the fact that said filter cartridge (5) is constituted:
by a filter pellet (60) for filtering first particles of a given size, said pellet (60) covering said inlet opening (2) of the first case (1) in full; and
a cap (61) covering said pellet (60) in such a
35 manner that the pellet is situated between the cap and the inlet opening (2) of the first case, said cap including filter orifices (62) for filtering second

particles of a size greater than the size of the first particles.

5 9. A ventilator unit according to any one of claims 1 to 8, characterized by the fact that it includes means (18) for making a fluid connection between the end (19) of said duct (14) situated outside said first case (1) with an inlet for feeding the inside of said garment with fluid.

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10. A ventilator unit according to any one of claims 1 to 9, characterized by the fact that it includes a flow regulator circuit suitable for delivering a second alarm signal when the fluid flow rate in the duct (14) varies
15 by a determined quantity about a given nominal flow rate value.

11. A ventilator unit according to claims 6 and 10, characterized by the fact that it includes means for
20 applying said second alarm signal to the control terminal (51) of said converter (50).

12. A ventilator unit according to claim 10 or claim 11, characterized by the fact that said flow rate regulator
25 circuit is disposed in said first case (1).